OAK RIDGE NATIONAL LABORATORY MANAGED BY UT-BATTELLE, LLC POST OFFICE BOX 2008, OAK RIDGE, TENNESSEE 37831-6170

ORNL

FOREIGN TRIP REPORT

TA 422420

DATE: 6/15/2018

SUBJECT: Foreign Trip Report for Douglas G. Bowen travel to Helsinki, Finland, to execute meetings at the

ISO TC85 Plenary

TO: Angela Chambers, Nuclear Criticality Safety Program Manager, National Nuclear Security

Administration / NA-511/GTN, Pantex Plant, PO Box 30020, Amarillo, TX 79120-0020

FROM: Douglas G. Bowen, Ph.D.

NTAG Deputy Overall Advisor for ISO TC85/SC5/WG8 "Nuclear Criticality Safety"

Convenor of ISO/TC 85/SC 5/WG 8 "Nuclear Criticality Safety"

MEETING: ISO TC85 Plenary Meeting and ISO TC85/SC5/WG8 "Nuclear Criticality Safety" Meetings

TITLE

MEETING: METSTA, Mechanical Engineering and Metals Industry Standardization, Helsinki, Finland

LOCATION MEETING:

DATES 05/14/18 – 05/18/18

ATTENDEES:

ON BEHALF OF

NCSP

Douglas G. Bowen

MEETING: BENEFIT TO NCSP The NCSP benefits from United States (US) participation in the leadership and development of International Organization for Standardization (ISO) standards related to Nuclear Criticality Safety (NCS) directly from sharing the US perspective on NCS community developments in the ANS-8 series standards. The ISO TC85 (Technical Committee on Nuclear energy) / SC5 (Subcommittee on Nuclear technology) / WG8 (Working Group 8) continues to develop international standards identified as needed by member bodies of ISO. SC5 and the WGs meet on an annual basis for face-to-face discussions for the review, comment, and revision of draft documents addressed during the year. Also, the WGs identify possibly needed additional standards to address evolving technologies and international concerns, economic or otherwise. This information is shared with the ANS-8 subcommittee participants at American Nuclear Society meetings to ensure awareness of ISO NCS standards work in progress, challenges, and guidance needs abroad. Working group chairs can use the developments in the ISO NCS standards to influence or enhance consensus standards in the US NCS community. The US Nuclear Regulatory Commission is now endorsing some ISO NCS standards for use by its licensees. A final report from Bowen for the meetings conducted is attached to this trip report.

MEETING PURPOSE:

The purpose of the travel to Helsinki, Finland, was to attend and participate in the ISO TC85 Plenary and to conduct 2-days of ISO TC85/SC5/WG8 "Nuclear Criticality Safety" business as convener and US ANSI/ASTM NTAG ISO deputy overall advisor for "Nuclear Criticality Safety". This is ongoing work and work from the previous meeting in Conshohocken, PA, was reviewed and new work resolutions were created for a new work year. The attached status report from the Helsinki WG8 meetings was presented to the Chair of ISO TC85/SC5 as the official report for work being done by WG8.

SITES VISITED: METSTA, Mechanical Engineering and Metals Industry Standardization,

Eteläranta 10, 00130 Helsinki, Finland

ABSTRACT: Bowen traveled to METSTA in Helsinki, Finland, to attend and participate in the ISO TC85

Plenary meeting. Bowen also conducted 2-days of ISO TC85/SC5/WG8 meetings toward the

goal of developing and maintaining the ISO NCS standards for use around the world.

ISO TC 85/SC5/WG8, Nuclear Criticality Safety REPORT to ISO/TC85/SC5 TC85 Plenary, METSTA, Mechanical Engineering and Metals Industry Standardization, Helsinki, Finland, 2018/05/14-18

CONVENOR	Douglas G. BOWEN
CO- CONVENOR	Mickaël HAMPARTZOUNIAN
NUMBER OF	13 Total (see attached attendance list)
PARTICIPANTS:	ISO TC85/SC5 Chair and Secretary attended portions of the WG8 meeting
COUNTRIES REPRESENTED:	1-CA, 4-FR, 1-JP, 0-KR, 1-SE, 3-UK, 2-US, 1-FI
DOCUMENTS	See attached agenda,
DISTRIBUTED	ISO TC85/SC5/WG8 Final Meeting Agenda
DOCUMENTS	See attached agenda,
DISCUSSED	ISO TC85/SC5/WG8 Final Meeting Agenda
WG MEETINGS SINCE THE LAST PLENARY (DATES AND PLACES)	None since the 2017/05/15 - 18 WG8 meeting in Conshohocken, PA, USA.
WORK ITEM IN PROGRESS	 Administrative tasks relevant to SC5/WG8 business with respect to IAEA, SC6/WG1, and SC5/WG4 collaboration, reviewing our N-documents used for internal reference, sharing definitions with TC85/WG1, and internal WG8 work practices Continued development of an N-document for <i>Two-column</i> translations of foreign words and phrases potentially specific to NCS Continued development of a working draft for a <i>Waste</i> standard to submit for NWIP ballot Continued development of a Draft International Standard (DIS) for <i>Nuclear Criticality Safety Dimensions</i> Development of a proposed standard for Nuclear Criticality Safety Risk Assessment Methodology Continued development of the proposed standard NCS Operations Training Development of a revision to ISO 7753 (FR to lead). Updating existing draft of an N-document for definitions to support WG8 products Updating an N-document for Nuclear Criticality Safety Role Definitions for consistency amongst ISO WG8 standards and to support the proposed standard for NCS Operations Training WG8 to consider a minor revision to the ISO 16117 Standard "Estimation of the number of fissions of a postulated criticality accident" Submit an amendment request for the resolution of FDIS comments received for the recent ISO 1709 revision
DIFFICULTIES	
MET	None

Resolution #1: ISO TC85/SC5/WG8 thanks Eric FILLASTRE for his hard work and dedication to support WG8.

Resolution #2: ISO TC85/SC5/WG8 thanks the Mechanical Engineering and Metals Industry Standardization (METSTA) for hosting the 21st TC85 Plenary meeting in Helsinki, Finland.

Work Item #1 – WG8 Business

- Resolution #3: Collaborate with the IAEA and determine how a representative from ISO TC85/SC5/WG8 can attend nuclear criticality safety meetings. BOWEN, HAMPARTZOUNIAN – July 2018
- Resolution #4: Initiate a new WG8 process review all N-documents (ISO 1709 definitions documents, WG8 roadmap, etc.) for validity each year prior to annual WG8 meetings. This new process will include reminding WG8 to review and provide comments to annual WG8 meetings. WG8, BOWEN, HAMPARTZOUNIAN – April 2019
- Resolution #5: Conduct an initial telecon to discuss the context and share our definitions with TC85/WG1. HAMPARTZOUNIAN –
 December 2018.
- Based on recent lessons-learned, create a new N-document for internal policies and procedures used to minimize comments at the DIS phase of a ballot. (Note: Redo DIS ballot and possibly extend the revision duration in the event a DIS ballot generates a large number of comments. There is also an amendment process to perform limited revisions within original scope. Can proceed directly to the desired stage, e.g., DIS ballot)
 - Resolution #6 Draft NDOC BOWEN, HAMPARTZOUNIAN
 September 2018
 - Resolution #7 WG8 review/comment BOWEN, HAMPARTZOUNIAN – February 2019
 - Resolution #8 Update NDOC for WG8 2019 WG8 meeting –
 BOWEN, HAMPARTZOUNIAN May 2019
- Resolution #10 Modify WG8 transportation NDOC as necessary based upon WG4 interactions. BOWEN, WG4 – May 2019
- Resolution #11 Share ISO 1709 and draft waste standard with WG4 to identify conflicts and ensure awareness of transportation statements in WG8 products. BOWEN, WG4 – June 2018
- Resolution #12 Invite SC5/WG4 to respond to resolution 11 with their feedback. BOWEN, HAMPARTZOUNIAN – December 2018
- Resolution #13 Solicit WG8 comments on the "Status of WG8 Standards" status document. WG8 to provide comments. BOWEN, WG8 – June 2018
- Resolution #14 Resolve WG8 comments on the "Status of WG8 Standards" status document. HAMPARTZOUNIAN – July 2018

Work Item #2 – 2 Column Guidance

<u>RESOLUTIONS</u>

 Resolution #15 – Revise 2-column guidance to clarify the intent/purpose of the document. HAMPARTZOUNIAN – September 2018

Work Item #3 - Draft Waste Standard

Resolution #16 – Seek a DIS ballot for the proposed waste standard. SUTTON, BOWEN – **September 2018**

Work Item #4 - NCS Dimensions Standard

- For the NCS Dimensions Standard the following deadlines are suggested for approval as an ISO standard.
 - Resolution #17 DIS comments resolved. BOWEN, BARDELAY
 October 2018
 - Resolution #18 WG8 comments/consensus of DIS comments. BOWEN, BARDELAY – December 2018
 - Resolution #19 FDIS ballot initiated. BOWEN, BARDELAY January 2018
 - Resolution #20 Publication as an ISO standard. BOWEN, BARDELAY – April 2018

Work Item #5 – Proposed Risk Assessment Standard

- Resolution #20 Update draft document and distribute to WG8 for review/comment. KHOTYLEV, BOWEN – December 2018
- Resolution #21 WG8 to conduct an informal vote about whether or not to move forward to the NWIP stage. BOWEN, WG8 – March 2019
- Resolution #22 If necessary, WG8 to review/comment on the draft Nuclear Criticality Safety Risk Assessment proposed standard and provide comments to Vladimir KHOTYLEV. WG8 – May 2019

Work Item #6 - Proposed Operations Training Standard

- Resolution #23 For the operations training proposed standard liaise with the nominated experts for this project to resolve outstanding WG8 comments. WEBBORN – August 2018
- Resolution #24: Issue a formal working draft to WG8 at the CD stage.
 BOWEN, WEBBORN September 2018

Work Item #7 – Proposed Revision to ISO 7753

- Resolution #25 WG8 members to provide information or presentation to WG8 about how they use CAAS in their country. SC5 leadership to provide assistance for an information request. Share this information with WG8. WG8 – December 2018
- Resolution #26 France to summarize information provided by WG8 on the use of CAAS. Information to be presented at next ISO meeting. LAGET – May 2019
- Resolution #27 Provide a new skeleton draft of the ISO 7753 revision. LAGET – May 2019

Work Item #8 – Generation of an N-Document for WG8 Definitions and Terms

- Resolution #28 Issue draft NDOC for WG8 definitions. HARRIS June
 2018
- Resolution #29 Update NDOC, as necessary, to consider new, proposed, definitions and terms. HARRIS – May 2019

Work Item #9 – Update the Current N-Document for NCS Role Definitions

Resolution #30 – Update NDOC for NCS Role Definitions for the proposed operations standard. HARRIS – June 2019
 Work Item #10 – Details for a Proposed Revision to ISO 16117
 Resolution #31 – Provide WG8 with details about a proposed, minor, revision to ISO 16117 prior to Systematic Review scheduled in July 2018. YAMANE – June 2018
 Work Item #11 – Proposed Amendment to ISO 1709
 Resolution #32 – Request an Amendment to the current version of ISO 1709 to resolve outstanding FDIS comments that are within the current scope of the standard. WG8 will propose sending this Amendment request directly to the DIS ballot stage. HARRIS, BOWEN – August 2018

ISO TC85/SC5/WG8 Nuclear Criticality Safety Meeting Agenda, Helsinki, Finland, May 16-17, 2018

	Wednesday, May 16, 2018 (9:00 am-6:00 pm)	
Time (Duration)	Topic of Discussion	Lead
0900 (15)	(1) Welcome, introductions and distribution of attendance list. Review, modification, and acceptance of agenda. Files: 01- TC85 SC5 WG8 Helsinki - Attendance List.pdf	BOWEN (US) WG8 Members
0915 (15)	(2) Review and status the Conshohocken WG8 meeting resolutions Files: 02a - TC85 SC5 WG08 2017 Final Report.pdf 02b - TC85 SC5 WG08 2018 Agenda Rev6 - Final - 05-16-2018.pdf	BOWEN (US)
0930 (45)	(3) "WG8 Roadmap: Working methodology" N-document. Resolution Status: Resolution 3 – WG8 to review and provide comments for "WG8 Roadmap: Working methodology" N-document. (Complete) Resolution 4 – Review WG8 feedback, incorporate comments, and publish the "WG8 Roadmap: Working Methodology" N-Document. (Complete) Files: 03a - 2018_WG8_France_Roadmap.pdf 03b - WG8_NCS_WG8_Roadmap_Working_methodology_N_Document-N181.pdf	HAMPARTZOUNIAN (FR)
1015 (35)	 (4) Status of 2-Column Guidance to ensure consistency with existing 1709 and WG1 Terminology standard Resolution Status: Resolution 5 – WG8 to review and provide comments on the draft of the 2-Column Guidance N-document and provide comments to Eric FILLASTRE for resolution. (Complete) Resolution 6 – Review WG8 feedback, incorporate comments, and publish the 2-Column Guidance N-document. (Complete) Files: O4a - 2-Column_Guidance_Document - N176.pdf O4b - 2018 WG8 France 2-column guidance.pdf 	HAMPARTZOUNIAN (FR)

Time Duration)	Topic of Discussion	Lead		
1050 (15)	Break			
1105 (35)	 (5) Status of the proposed waste standard draft Resolution Status: Resolution 7 – Distribute draft 9 and WG8 comment responses for the Waste standard to WG8. (Complete) Resolution 8 – Submit the Waste standard draft 9 for NWIP ballot. (Complete) Resolution 9 – WG8 to review draft 9. (Complete) Resolution 10 – Discussion of WG8 comments on draft 9 on a WG8 telecon, if necessary. (Complete) Files: 05a - ISO_waste_standard_presentation.pdf 05b - NWIP ISO_Waste_Standard_(Criticality)_Draft9.pdf 	SUTTON (UK)		
1140 (20)	 (6) Discussion of the resolution of ISO 1709 DIS comments. Resolution Status: Resolution 11 – Resolve all WG8 comments in parallel with resolution of ISO 1709 DIS comments. (Complete) Files: O6 - ISO-1709 - May 2017 Meeting.pdf 	HARRIS (UK)		
1200 (20)	 (7) Status of the draft NCS Dimensions Standard and status of DIS ISO 21391 ballot Resolution Status: Resolution #12 – WG8 to review draft NCS Dimensions Standard. WG8 (Complete) Resolution #13 – To determine a path forward with respect to a CD or DIS ballot and then launch a ballot (Complete) Files: 07a - ISO_DIS_21391_(E) - NCS Dimensions Standard DIS Ballot.pdf 07b - 2018_WG8_France_DIS_ISO_21391_Dimensions_Std.pdf 	HAMPARTZOUNIAN (FR)		
1220 (40)	(8) Status of the ISO 1709 revision Resolution Status: • Resolution 18 − Resolve ISO 1709 DIS ballot comments and submit for FDIS ballot. (Complete) Files: 08a - ISO_FDIS_1709_(E).pdf 08b - ISO-1709 Post DIS - Draft 9 - Clean Copy.pdf 08c - 2018 WG8 France ISO 1709.pdf	HARRIS (UK)		
1300 (60)	Lunch			

Wednesday, May 16, 2018 (9:00 am-6:00 pm)								
Time (Duration)	Topic of Discussion	Lead						
1400 (30)	(9) Status of the NCS Risk Assessment draft standard Resolution Status: • Resolution 14 – WG8 to review and comment on the draft Nuclear Criticality Safety Risk Assessment and provide comments to Vladimir KHOTYLEV. (Not complete) • Resolution 15 – Vladimir KHOTYLEV to incorporate WG8 comments and provide a new draft to WG8. (Not complete) Files: 09a - Draft ISO risk assessment standard page 1.pdf 09b - R16_Nuclear Criticality Risk Assessment_DRAFT 05May17.pdf 09c - Nuclear Criticality Risk Assessment_DRAFT 2018May07.pdf 09d - Update_of_Criticality_Risk_Assess_Standard	KHOTYLEV (CA)						
1430 (30)	(10) Status of the Definitions N-Document for ISO-1709 Resolution Status: Resolution 16 – WG8 to provide review and comment on draft 3 of N-document for inclusion in the ISO 1709 standard. (Not complete) Resolution 17 – Publish ISO 1709 definition N-document. (Not complete) Files: 10 - ISO-1709 Definitions - May 2017 Meeting.pdf	HARRIS (UK)						
1500 (45)	 (11) Status of the Operations Training draft standard (ISO/NP 23133) Resolution Status: Resolution 19 – Ben WEBBORN to revise draft Operations Training standard with comments provided to date. (Complete) Resolution 20 – Submit draft Operations Training standard for NWIP ballot. (Complete) Files: 11 - ISO_TC85_SC5_WG8 - Criticality Safety Training for Operations Update.pdf 	WEBBORN (UK)						
1545	Break							
1600 (50)	 (12) Revision of ISO-7753 "Nuclear Energy – Performance and testing requirements for criticality detection and alarm systems" Resolution Status: Resolution 22 – WG8 to revise the ISO 7753 standard. (Complete) Resolution 23 – FR to lead revision to the ISO 7753 standard with the help of the UK. (Complete) Resolution 24 – WG8 members to send proposals for updated standard to FR. (Not completed) Resolution 25 – FR to coordinate input from the WG8 to propose an outline of the scope for the updated standard (Not completed) Resolution 26 – FR to submit skeleton draft of updated standard to WG8. (Not completed) Files: 12a - 2018_05_16_ISO_7753_WG8.pdf 12b - 2018_WG8_France_Associated_work_FR_UK.pdf 12c - A_french_approach_BNEN-CAAS.pdf 12d - ISO+7753-1987.pdf 12e - SL CAAS Approach.pdf 	LAGET (FR) HAMPARTZOUNIAN (FR) DULUC (FR) SUTTON (UK)						

	Wednesday, May 16, 2018 (9:00 am-6:00 pm)									
Time (Duration)	Topic of Discussion	Lead								
1650 (20)	 (13) Publish N-Doc for NCS Role Definitions to support ISO 1709 revision and "Maintenance of published and issued documents" Resolution Status: Resolution 21 – HARRIS to submit draft 3 to publish the N-document for Nuclear Criticality Safety Role Definitions (Complete) Files: 13 - ISO_TC85_SC5_WG8_Role_Definitions_N-Doc_N16219Jul17.pdf 	HARRIS (UK)								
1710 (40)	(14) WG4 (Transport) Discussion ISO TC85/SC5/WG8 Position Statement N-document Regarding Nuclear Material Transportation	HARRIS (UK) SUTTON (UK) HAMPARTZOUNIAN (FR) DESNOYERS (WG4)								
1750 (10)	(15) End of day discussion and documentation of resolutions	WG8								
1800	Adjourn									

Thursday, May 17, 2018 (9:00 am-6:00 pm)								
Time (Duration)	Topic of Discussion	Lead						
0900 (20)	(16) Summary of Wednesday WG8 meeting/discussions and presentation of agenda for Thursday	BOWEN (US)						
0920 (40)	(17) Discussion of WG8 policy for path forward on NWIP ballots and approving DIS and FDIS ballots	WG8						
1000 (30)	 (18) Discussion of upcoming systematic reviews (see table on last page of this agenda) JP Intent to lead a minor revision of ISO-16117-2013 – systematic review this summer Files: 18a - ISO-TC85-SC5-WG8-N00X Annual Support.pdf 18b - JP Minor revision proposal of 16117.pdf	WG8 YAMANE (JP)						
1030 (30)	(19) Discussion about use of ISO WG8 workspace for archiving project documents and comment resolution	BOWEN (US)						
1100 (15)	Break							
1115 (30)	(20) WG8 Linkages with IAEA Proposed discussion: M. Prigniau from the French mirror group and the WG8 attended the last technical meeting on criticality safety hold by IAEA. Files: 20 - WG8_2018_discussion-IAEA.pdf	PRIGNIAU (FR)						
1145 (30)	(21) Common meeting with ISO TC85/SC6/WG1	WG8 WG1 BRISSON (US)						
1215 (15)	(22) CA Standards and regulations status Files: 22 - Update_of_Criticality_Safety_Standards.pdf	KHOTYLEV (CA)						
1230 (15)	(23) UK Standards and regulations status Files: 23 - UK Standards and Regulation Status - May 2017 Meeting.pdf	HARRIS (UK)						

Thursday, May 17, 2018 (9:00 am-6:00 pm)								
Time (Duration)	Topic of Discussion	Lead						
1245 (15)	(24) OECD/NEA criticality working group status. Discuss activities in the ICSBEP and IRPhE. Files: 24 - Mennerdahl - OECD-IAEA-Rev.1.pdf	MENNERDAHL (SE)						
1300 (60)	Lunch							
1400 (15)	(25) US Standards and regulations status Files: 25 - Bowen_DOE_ANSI_Summary_May2018.pdf	BOWEN (US)						
1415 (15)	(26) FR Standards and regulations status Files: 26 - French_Regulation-PSR.pdf	HAMPARTZOUNIAN (FR)						
1430 (15)	(27) JP Standards and regulations status Files: 27 - Status of Japanese standards, regulations and needs.pdf	YAMANE (JP)						
1445 (15)	(28) US NRC regulation/guidance status and activities of ANSI/ANS-8.12 and -8.24 Files: 28 - ISO Working Group May-2018 Tripp.pdf	TRIP (US)						
1500 (45)	(29) New work and additional WG8 discussion, as required	WG8						
1545 (15)	Break							
1600 (45)	New work and additional WG8 discussion, as required	WG8						
1645 (75)	(30) Summary, wrap-up, SC5 plenary preparation, generation of final resolutions and presentation Files: 30 - TC85 SC5 WG08 2018 Report Resolutions Slides.pdf	WG8 BOWEN (US) HAMPARTZOUNIAN (FR)						
1800	Adjourn							



ATTENDANCE LIST

Meeting

8th meeting of ISO/TC 85/SC 5/WG 8

Place and date

Finland (Helsinki) 16 May 2018 to 17 May 2018

Name and first name	Appointed by ISO Member Body or organization in liaison	Email address recorded	Signature & Confirmation of email
Dr Bowen Douglas	ISO/TC 85/SC 5/WG 8	bowendg@ornl.gov ✓	046Bn
Denton Mark	BSI (United Kingdom)	mark.denton@sellafieldsites.com	White
M. Duluc Matthieu	AFNOR (France)	matthieu.duluc@irsn.fr	Julia
M. Hampartzounian Mickaël	ISO/TC 85/SC 5/WG 8	mickael.hampartzounian@orano.gro up	OM.
Mr Harris Neil	BSI (United Kingdom)	neil.harris@nnl.co.uk	NHOS
Mr Hibberd Ky	ISO/TC 85/SC 5	ky.hibberd@sellafieldsites.com	Koller
Dr Khotylev Vladimir	SCC (Canada)	vladimir.khotylev@cnsc-ccsn.gc.ca	
M. Laget Michaël	AFNOR (France)	michael.laget@cea.fr	£#
Mr Mennerdahl Dennis	SIS (Sweden)	dennis.mennerdahl@ems.se	Du
M. Prigniau Michaël	AFNOR (France)	Michael.PRIGNIAU@cea.fr	
Mr Sutton Andrew	BSI (United Kingdom)	Andrew.m.sutton@sellafieldsites.co m	that

Name and first name	Appointed by ISO Member Body or organization in liaison	Email address recorded	Signature & Confirmation of email
Mr Tripp Christopher	ANSI (United States)	Christopher.tripp@nrc.gov	Carter S. h
Mr Webborn Ben	BSI (United Kingdom)	benwebborn@webborn-nuclear.com	Alla
Dr Yamane Yuichi	JISC (Japan)	yamane.yuichi@jaea.go.jp	Alle
Karin Rantami	aler SFS (Finland) Karin, rantamaki@stul	. S- Kain Rant

Schedule of 21th Plenary Meeting of ISO/TC 85 14th - 18th May, 2018, Helsinki - Finland

Friday 2018-05-18	Afternoon 2.00 pm to 5.00 pm		Auditorium,						ISO/TC 85	Plenary						
Friday 20	Morning 9.00 am to 01.00		Auditorium,	9.00 am to 11.00	SC5 Plenary									11.00 am to 1.00 pm	SC 6	
Thursday 2018-05-17	Afternoon 2.00 pm to 6.00 pm									SC 5/WG 1	SC 5/WG 4	SC 5/WG 5	SC 5/WG 8	SC 6/WG 1	SC 6/WG 3	ISOTC85:
Thursday	Morning 9.00 am to 1.00 pm									SC 5/WG 1	SC 5/WG 4	SC 5/WG 5	SC 5/WG 8	SC 6/WG 1	SC 6/WG 3	Auditorium SC 2 Plenary
2018-05-16	Afternoon 2.00 pm to 6.00 pm	SC 2/WG 2 (2.00 to 4.00 pm)		SC 2/WG 14 (2.00 to 4.00 pm)	SC 2WG 17 (2.00 to 4.00 pm)			SC 2WG 22 (2.00 to 4.00 pm)	SC 2/WG 23 (2.00 to 4.00 pm)	SC 5/WG 1	SC 5/WG 4	SC 5/WG 5	SC 5/WG 8	SC 6/WG1	SC 6/WG 3	SC 2/AG (4.00 to 6.00pm)
Wednesday 2018-05-16	Morning 9.00 am to 1.00 pm			SC 2/WG 14	SC 2/WG 17		SC 2/WG 21	SC 2/WG 22	SC 2/WG 23	SC 5/WG 1	SC 5/WG 4	SC 5/WG 5	SC 5/WG 8	SC 6/WG 1	SC 6/WG 3	SC 2/AHG
18-05-15	Afternoon 2.00 pm to 6.00 pm	SC 2WG 2	SC 2/WG 13	SC 2/WG 14	SC 2/WG 17	SC 2/WG 19	SC 2/ WG 21	SC 2/WG 22	SC 2/WG 23							
Tuesday 2018-05-15	Morning 9.00 am to 1.00 pm	SC 2/WG 2	SC 2/WG 13	SC 2/WG 14	SC 2/WG 17	SC 2/WG 19	SC 2/WG 21	SC 2/WG 22	SC 2/WG 23							
118-05-14	Afternoon 2.00 pm to 6.00 pm	SC 2/WG 2	SC 2/WG 13	SC 2/WG 14 1)	SC 2/WG 17	SC 2/WG 19		SC 2/WG 22	SC 2/WG 23	ISO/TC 85/SC 5						ISO/TC 85
Monday 2018-05-14	Morning 9.00 am to 1.00 pm		Auditorium,	9.00 to 10.00am	Welcome	session	10.00 to 11.00am	session	11.00 to 12.00am	SC 5 Welcome session	12.00am to 1.00pm SC 6 Welcome	session				

1) WG14 will split into two sub groups on Monday afternoon May 14th.

Social event 6.30 pm to 8.30 pm

DISTRIBUTION

- 1. Douglas G. Bowen (<u>bowendg@ornl.gov</u>)
- 2. Angela Chambers (angela.chambers@nnsa.doe.gov)
- 3. Lori Scott (LoriscOtt@aol.com)